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Challis National Forest Annual Aerial Survey August 1958

By

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Entomologists

Prepared by

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FOREST INSECT RESEARCH
MISSOULA, MONTANA

CHALLIS NATIONAL FOREST
ANNUAL AERIAL SURVEY
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INTRODUCTION

The annual aerial survey of the Challis National Forest was conducted in the same manner as in previous years, i. e., flights were made to cover all forested areas by drainages. The purpose of the examination was to detect evidence of unusual forest insect activity.

Where aerial observations indicated abnormal conditions further checks were made on the ground whenever possible. When formal ground appraisal surveys were required such was done and are reported separately.

Three degrees of intensity of damage, light, medium, and heavy, were used on the aerial work with defoliators that destroy the current year's needles. However, with defoliators such as pine butterfly, old growth needles are destroyed, detection is based on observing the adults in flight. Thus, a ground appraisal survey is required.

In the case of most bark beetles, the aerial detection reveals only the damage of the previous year's attacks and not the new infestations. In some cases, there may be fading of foliage during the season of attacks. Generally, ground work is required to determine the current status of bark beetle infestations.

FOREST RESUME'

A definite increase was noted in the size of areas of budworm defoliation. In 1957 only 18,200 acres were reported as infested with budworm, in 1958 there are 98,700 acres. From indications it would appear possible that the increase could be due to migrating moths from the Boise National Forest. The adjacent area on the Boise Forest was sprayed in 1956, but poor budworm mortality resulted.

Both spider mite damage to Douglas-fir and that by alpine fir defoliator, assumed to be black-headed budworm, were not observed in 1958.

1/ Forest aid-research

In general, damage due to bark beetles appears to be increasing, though the loss of trees remain at a high endemic level. Several areas of kill by the Douglas-fir beetle in Douglas-fir and western pine beetle in ponderosa pine were noted. The kill does not represent a serious loss, but this was the first time for several years that damage by these beetles has appeared to any extent in the area. The fir engraver damage in true firs remains static at a high endemic level.

RESULTS BY DISTRICTS

The areas of infestations are reported and keyed by ranger district:

Valley Creek District (D-1). The Valley Creek District contains the largest area of budworm infestation on Douglas-fir and true firs. One area of approximately 84,000 acres lies mainly along the Middle Fork Salmon River and up along its tributaries. At present the infestations occur in large isolated blocks with intensity of defoliation ranging from light to heavy.

The loss from Douglas-fir beetle attacks occurred in groups of not more than 10 - 15 dead trees per drainage as indicated on the map.

For the first time in many years western pine beetle in ponderosa pine began appearing along the Middle Fork Salmon River. The loss is quite endemic, but nevertheless represents an increase in beetle activity which would bear watching.

Loon Creek District (D-2). The budworm infested area on this district practically doubled in size this year. Only 6,400 acres showed defoliation in 1957 and approximately 13,000 acres in 1958. However, about 10,000 acres are part of the area on D-1. The intensity of damage increased as sharply as the size of the area. In 1957 only a light degree of defoliation was noted; in 1958 defoliation was medium to heavy.

Only one area of any consequential loss due to the Douglas-fir beetle was found on D-2 (see map).

Clayton District (D-3). The area comprising this district was relatively free of any unusual forest insect damage.

May District (D-4). Only one small area (approximately 1,700 acres) of budworm infestation was found on the May district. However, over 75 ponderosa pine trees were noted as killed by the western pine beetle. The majority of dead trees lie within Black Canyon and South Creek drainages.

Some dead alpine fir trees, as a result of fir engraver beetle activity, were located on the north end of the east division of D-4.

Mackay District (D-5). This district was found to be relatively free of any unusual forest insect activity.

SUMMARY OF INSECT DAMAGE

District	Insect	Approximate damage: Trees killed	Approximate damage: Acres defoliated
Valley Creek (D-1)	Budworm	---	84,000
	Douglas-fir beetle	Slight increase	---
	Western pine beetle	Slight increase	---
Loon Creek (D-2)	Budworm	---	13,000
	Douglas-fir beetle	Endemic	---
Clayton (D-3)	No insect damage of any consequence		
May (D-4)	Budworm	---	1,700
	Western pine beetle	75	---
Mackay (D-5)	No insect damage of any consequence		
Forest Total	Budworm	---	98,700
	Douglas-fir beetle	Static	---
	Western pine beetle	Increasing	---
	Fir engravers	Static	---

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
LYLE F. WATTS, CHIEF
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CHALLIS NATIONAL FOREST

LOST RIVER DIVISION

IDAHO

BOISE MERIDIAN

1946

SCALE

LEGEND

- NATIONAL FOREST BOUNDARY
- ADJACENT NATIONAL FOREST BOUNDARY
- GOOD MOTOR ROAD
- POOR MOTOR ROAD
- TRAIL
- RAILROAD
- TELEPHONE LINE
- PRIMITIVE AREA BOUNDARY
- MAIN MOTOR HIGHWAY
- SUPERVISOR'S HEADQUARTERS
- DISTRICT RANGER STATION
- GUARD OR RANGER STATION NOT PERMANENTLY OCCUPIED
- PERMANENT LOOKOUT STATION
- TRIANGULATION STATION
- TRIANGULATION STATION AND PERMANENT LOOKOUT STATION
- FOREST SERVICE RADIO STATION
- HOUSE, CABIN, OR OTHER BUILDING

REPORT ALL FIRES TO FOREST SUPERVISOR
RANGER, SHERIFF OR ANY TELEPHONE OPERATOR

D-1

D-2

D-3

D-4

D-5

LEGEND

DEFOLIATORS

Budworm

Intensity (L) (M) (H)

BARKBEETLES

Douglas-fir beetle

Western pine beetle

Fir engravers

COMPILED AT REGIONAL OFFICE, OGDEN, 1946,
FROM U.S.G.S. TOPOGRAPHIC SHEETS AND
FOREST SERVICE BASE MAPS AS AVAILABLE.
TRACED 1946 BY STAFF. REVISED BY M.M.B. 1948

CAUTION: THE ACCURACY OF THIS MAP
IS UNKNOWN SINCE COMPILED FROM
SOURCES OF UNKNOWN ACCURACY.

POLYCONIC PROJECTION
1927 NORTH AMERICAN DATUM